CFA Society Chile

FINANCIAL EDUCATION

COMPETITION ANALYSIS IN FINANCE (PART 1)

As a complement to the standard tools for financial analysis - which provides answers on the fair value of securities issued by a company, but whose results depend on assumptions about the competitive dynamics faced by said company - Daniel proposes an alternative approach to security selection, based on the fundamentals of Industrial Organization (IO).

In this first part, we introduce an analytical framework to integrate IO concepts into financial screening, and review some case studies of companies with *Market Power* - and market-leading returns over the past decade.

By Daniel Urdaneta, CFA

Why is Competition Analysis relevant for finance?

A decade of professional experience in the industry, divided equally between spheres that typically do not have much overlap (the *buy side* of the financial sector and economic consulting), has taught me that a phenomenon central to understanding the modern economy - *Market Power* - has radically different implications depending on the profession.

Market Power is, simply put, the ability of a firm (or an industry) to generate profits in excess of its costs. Market power is a spectrum of possibilities that goes beyond the binary simplification between "monopoly" and "perfect competition" of Economics 101 textbooks, and is the cornerstone of *Industrial Organization*, the fastest growing field of economics today[1] . The degree of a firm's market power, moreover, defines how effective and durable is the "*competitive moat*" [2] it possesses.

In this analytical framework, it’s relevant to study both the market power of a firm (i.e., the *moat* of a firm with respect to its rivals, customers, suppliers, etc.), and the level of concentration of an industry (i.e., the level of competitive rivalry among several firms producing related goods and services, as well as the *moat* of this group of firms with respect to substitutes, suppliers or final customers).

There are some standard measures that indicate market power. At the company level, a market share above 40% with no close competitors, or gross margins persistently higher than the rest of the industry, are preliminary indications of a company with high market power. At the industry level, a standard tool is the HHI analysis (index greater than 2500 indicates a "highly concentrated" market, where the firms in the market have high market power)[3] . A quick rule of thumb is the "*4 to 3 criterion*” (i.e., markets where 4 or fewer players control more than 80% of sales are "*highly concentrated"*; in these markets, regulators are likely to prevent further concentration through mergers on the grounds that the incumbents possess a relevant degree of market power)[4].

A more in-depth analysis requires studying the particularities of each company and/or market - for example, how important is innovation in this industry, how important is the bargaining power of consumers

[1] See Bresnahan, Timothy F. "Empirical studies of industries with market power." *Handbook of industrial organization* 2 (1989): 1011-1057.

[2] Warren Buffett coined this term at Berkshire Hathaway's annual shareholder meeting in 1995, referring to the ability of a firm to protect its market power against threats of actual/potential rivals, suppliers or customers. See: https://www.cnbc.com/2018/05/07/warren-buffett-believes-this-is-the-most-important-thing-to-find-in-a-business.html.

[3] The Herfindahl-Hirschman Index (HHI) is a measure of market concentration; it is calculated as the sum of the market shares (squared) of all participants in a market. It ranges from 0 (infinite players of the same size) to 10000 (a single player has 100% of the market). See the U.S. Department of Justice Merger Analysis Guide, available at: https://www.justice.gov/atr/horizontal-merger-guidelines-08192010.

[4] This criterion comes from the telecommunications industry and should only be taken as a general reference. See: https://www.eylaw.be/2020/06/22/antitrust-ma-4-to-3-mergers-might-be-back-on-the-strategic-table/.

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and suppliers, how important is the competitive pressure of substitute goods, or how differentiated is the value proposition of a company with respect to the rest of the market - and it is difficult to build a "unified theory of competition". Nevertheless, studying the market power of a company and/or an industry adds great value to financial analysts at the stock selection stage.

Differences between finance and antitrust

A Competition economist usually works under the premise that a firm with high market power (in the extreme, with a *dominant position*) generates a sub-optimal outcome from a social point of view, especially for final consumers, and therefore limits must be imposed on the exercise of this market power. This view justifies state intervention in markets through antitrust lawsuits, sectoral regulation, prohibition of mergers, or the imposition of mitigation measures or "remedies" as a condition for approving mergers in concentrated or “risky” markets.

As it often happens in the real of social sciences, there are opinions for and against state interventionism in markets - even among practitioners - but the central idea is that a market economy requires certain controls on the market power of firms to generate socially efficient outcomes.

The view of a financial analyst is radically different. Since the objective is to identify investment opportunities for their clients (and not to predict the optimal decision of a social planner), the main focus of analyzing a company from an Industrial Organization perspective is to determine whether it possesses a significant and stable source of market power. Considerations about the effects of a company with market power on social welfare (as long as it acts in accordance with ESG criteria, and its operation does not violate the law) take a back seat. This view is shared by Warren Buffett[5], historic Columbia University professor Bruce Greenwald[6], and Morningstar's stock evaluation methodology[7].

It is no coincidence that the words most frequently used by analysts to highlight the attractiveness of a stock (e.g., "leadership position", "possession of patents and essential assets", "high barriers to entry", "*sticky customer base*", and "high switching costs") are, in turn, terms that are frowned upon by competition authorities, since these factors are indicative of a company with high market power.

Case studies

To close the first part of this column, we now present a brief summary of success stories, focusing on 5 companies in the US that were "*ten-baggers"*[8] in the last decade (as measured by their total return[9]) and the economic fundamentals behind their superior performance. As we will see, market power plays a key role in explaining their track record.

1. NVIDIA Corporation (NASDAQ:NVDA)

Total return (June 2013-June 2023): +11305%.

NVIDIA recently joined the select club of companies with a market capitalization in excess of $1 trillion. Its market power is centered on the competitive moat built upon its R&D department, which designs the proprietary technology behind the world's highest performing video cards, and which have found applications in all the latest digital trends: video gaming, cryptocurrency mining, augmented reality, Internet of Things (IOT), and now Artificial Intelligence (AI). Market consensus indicates that NVIDIA’s leadership position in video cards is unmatched by peers[10].

[5] Before the U.S. Congressional Commission to study the origin of the 2007-2008 crisis, Warren Buffett said that "*The most important decision in evaluating a business, without question, is its pricing power"* (i.e., its market power). See: https://www.bloomberg.com/news/articles/2011-02-18/buffett-says-pricing-power-more-important-than-good-management#xj4y7vzkg

[6] See Bruce Greenwald and Judd Khan, *"Competition Demystified: A radically simple approach to business strategy"* (2007), available at: https://www.amazon.com/Competition-Demystified-Radically-Simplified-Approach/dp/1591841801.

[7] The *Morningstar Economic Moat Rating* captures a company's long-term competitive advantage. See: https://www.morningstar.com/articles/735365/the-morningstar-economic-moat-rating.

[8] Term coined by investor Peter Lynch in his book *One Up On Wall Street*. Refers to an investment that appreciates in value up to 10 times its initial value. See: https://www.investopedia.com/terms/t/tenbagger.asp.

[9] Capital appreciation + dividends, considering dividend reinvestment. Estimated from DQYDJ with closing values as of June 20, 2023 (current results may vary case by case). Source available at: https://dqydj.com/stock-return-calculator/.

[10] See: https://www.imd.org/research-knowledge/strategy/case-studies/nvidia-winning-the-deep-learning-leadership-battle/.

2. Tesla, Inc. (NASDAQ:TSLA)

Total return (June 2013-June 2023): 3435%.

Tesla is notorious for its eccentric founder, Elon Musk, and its devoted consumer-investor base. Beyond the hype, though, Tesla possesses an undisputed leadership position in the global electric vehicle (EV) market, and has the potential to build lasting competitive moats in essential segments of the EV value chain that its rivals do not possess (battery technology, service station networks, control over downstream sales channels)[11] .

In addition, due to a favorable status versus its peers in terms of ESG criteria (unlike the other automakers, which remain leveraged in the traditional gasoline vehicle business), Tesla also has a benign reputation with end-investors, allowing it access to capital on a larger scale and at lower cost than its rivals.

3. Broadcom Inc. (NASDAQ:AVGO)

Total return (June 2013-June 2023): 2751%.

Broadcom is not a well-known company to end consumers, but its leadership position in the semiconductor market is famous among competition authorities. The company has sailed towards the top ranks of the industry by specializing in microchips and other essential elements for electronic devices, data centers, telecommunications networks, servers, and industrial software.

With a history of growth through acquisitions[12] (both of direct rivals, upstream suppliers and downstream customers), antitrust investigations against it[13] , and a strained relationship with counterparties such as Samsung[14] , Broadcom's *moat* is based on inorganic growth and tight control of its supply chains and ownership rights.

4. Apple, Inc. (NASDAQ:AAPL)

Total return (June 2013-June 2023): 1320%.

Virtually everyone on earth is familiar with the iconic brand behind the iPhone, the MAC OS operating system, and the closed technology ecosystem that came to compete strongly against Microsoft in the 2000s.

Apple's market power comes from both hardware (its products are iconic for their high prices compared to the competition, and a loyal consumer base that annually renews its equipment to keep up with the latest wave of innovations) and software (Apple has a tight grip on flow of transactions and data that move within its ecosystem, which has led it to face antitrust lawsuits from companies that sell services in its App Store)[15].

5. Microsoft Corporation (NASDAQ:MSFT)

Total return (June 2013-June 2023): +1035%.

Closing this list, Microsoft is the prototype of a company with a wide and long-lasting moat; it also has a reputation for clashes with antitrust regulators, as it was the protagonist of one of the most important antitrust lawsuits in US judicial history[16] (and, most recently, the USD 68,7 billion acquisition of Activision-Blizzard)[17-18]. There is no doubt that Microsoft is synonymous with leadership: its software is present across the globe, and it has been able to stay relevant for much longer than the giants of the past such as IBM.

In the last decade, two areas in which the company converted its leadership position into durable sources of

[11] See: https://daraykhman.medium.com/teslas-competitive-moats-plural-4302b96fa8ce.

[12] Its most recent acquisition, of *cloud* services operator VMware, appears to be close to being approved in Europe, see: https://www.reuters.com/markets/deals/eu-antitrust-regulators-okay-broadcom-vmware-deal-sources-says-2023-06-12/.

[13] See https://www.techradar.com/news/broadcom-accused-of-abusing-dominant-position-in-the-us and https://ec.europa.eu/commission/presscorner/detail/en/IP_19_6109.

[14]https://www.theregister.com/2023/06/14/broadcom_samsung_south_korea/.

[15] https://techcrunch.com/2023/04/24/apple-wins-antitrust-court-battle-with-epic-games-appeals-court-rules/

[16] The U.S. Department of Justice's lawsuit against Microsoft for monopolization of the PC market, which took place between 1998 and 2001. See: https://en.wikipedia.org/wiki/United_States_v._Microsoft_Corp.

[17] Original press release (Jan 18, 2022) available at: https://news.microsoft.com/2022/01/18/microsoft-to-acquire-activision-blizzard-to-bring-the-joy-and-community-of-gaming-to-everyone-across-every-device/

[18] To date, the merger has been approved in all major jurisdictions except the UK (and the US' FTC unsuccessfully tried to block the merger). See FTC case docket at: https://www.ftc.gov/legal-library/browse/cases-proceedings/2210077-microsoftactivision-blizzard-matter.

profits stand out: the expansion into adjacent businesses (Cloud computing, data center, enterprise applications), and the migration to a subscription-based *Software-As-A-Service* (SAAS) model, which enables Microsoft to offering faster and greater software innovation to end users customer and mitigates the revenue declines from software piracy. Its most recent area of innovation (Artificial Intelligence, through its investment in the OpenAI foundation) could further cement its leadership position and maintain its trend of above-industry-average earnings for the foreseeable future.

Conclusions

Analyzing companies through the lens of IO is useful in determining the sources of a company's long-term value, and allows us to look beyond the information in financial statements. While there is no generic formula for success, there are some approaches that are more "friendly" to competition law than others. Generally, "*dominance by merit*" (i.e., organic, innovation-driven growth) is better viewed than other sources of market leadership (such as growth by acquisitions, protection of patents and/or regulatory moats, etc.). Practices such as the acquisition of potential rivals (*buy or bury*), the imposition of vertical restraints, or attempts to maintain a *moat* through regulation, are increasingly frowned upon by regulators, and represent unsustainable sources of market power over time that should dissuade long-term investors.

On the other hand, just as there are leading companies in each industry, there are also leading industries in the economy. In the recent past, the technology sector (and within it, the semiconductor industry) leads the podium of the most profitable industries. This leadership has underlying reasons (e.g., trends in the global economy towards greater automation and digitization, and now a new wave of AI-driven innovation), but this trend could change in the next decade if antitrust regulators are successful in imposing measures to weaken the *moats* of this industry.

Bonus: Other areas of application

There are many alternative ways to integrate competition economics concepts in a financial analysis framework, for example:

- The above analysis can be reversed to study the worst performing companies or industries (generally, these are companies that have lost *moats*, or whose industry has undergone a process of creative destruction).
- Additionally, it's useful to evaluate the intensity of intra-industry competition to identify the industrial sectors with higher concentration (in equilibrium, all else equal, industries with lower competitive rivalry tend to generate higher profits than industries with high competition);
- Differences in competitive conditions between countries can be assessed for the same industry (countries with more concentrated industries, all else equal, tend to generate higher returns to shareholders);
- It can be used as a complement to a peer group analysis. Generally, the leading companies in each industry tend to trade at higher multiples than their peers, but buying opportunities can be secured (e.g., a company that has greater market power than its rivals, but doesn't trade at a higher price – in terms of P/E or P/B ratios– than other companies within the same industry.
- It is possible to analyze *a priori* whether an M&A transaction will be value-enhancing for a company (e.g., if it enhances the buyer's market power in the long term) or, on the contrary, if it will destroy value (e.g., acquisitions that do not guarantee moats sustainability, or whose strategy aims at disputing markets with high competitive rivalry).

Disclosure

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